REMARKS/ARGUMENTS

In paragraph 2 on page 2 of the Official Action, claims 1-36 were rejected under 35

U.S.C. 112, second paragraph, as being indefinite with respect to "applying a mapping function

to the respective utilization value of each distributed processing unit to obtain a respective

weight." In reply, "mapping function" has been changed to "function" so as to make the claims

more clear and concise because no special or limiting meaning of "mapping" is intended.

Support for this amendment is found in applicant's specification on page 36 lines 1-5 and page

37 lines 10-17.

A person of ordinary skill in the pertinent art would clearly understand the meaning of

the phrase "applying a function to the respective utilization value of each distributed processing

unit to obtain a respective weight" in view of the applicant's specification on page 36 lines 1-5

and page 37 lines 10-17. Evidence that a person of ordinary skill in the pertinent art would

clearly understand the meaning the phrase "applying a function to the respective utilization value

of each distributed processing unit to obtain a respective weight." is enclosed and cited on the

enclosed form 1449. In view of this evidence, a person of ordinary skill in the pertinent art

would understand that the function is a relation between utilization values and respective

weights, and application of the function to a given utilization value provides its respective

weight. Moreover, a person of ordinary skill in the pertinent art would understand that a

computer processor could be programmed to apply the function to the given utilization value by

executing a group of instructions (known as a subroutine, routine, or procedure), which would

produce the respective weight for the given utilization value.

On page 3 of the Official Action, claims 1, 6, 19, and 24 were rejected under 35 U.S.C. 102(e) as being anticipated by Zielinski et al. (U.S. 7,487,243 B1). In reply, claims 1 and 19 have been canceled, claim 2 has been re-written in independent form including all of the limitations of claim 1, claim 6 has been amended to depend on claim 2, claim 20 has been re-written in independent form including all of the limitations of claim 19, and claim 24 has been amended to depend upon claim 20.

On page 5 of the Official Action, claims 2-4 and 20-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al. (U.S. 7,487,243 B1) in view of Choquier et al. (U.S. 5,774,668). In reply, claims 3 and 4 have been amended to depend upon claim 2, and claims 21 and 22 have been amended to depend upon claim 20. Otherwise, applicant respectfully traverses, and respectfully submits that one of ordinary skill in the art would not have been motivated to combine Choquier with Zielinsky and to modify the combination as required to reconstruct the applicant's invention as now claimed in claims 2-4 and 20-22.

With respect to applicant's independent claims 1 and 19, the Official Action construed the "respective utilization value of each distributed processing unit" as broadly as possible to cover Zielinski's "resource constraints for the tunnel termination devices" such as "the maximum subscriber sessions supported by each of the tunnel termination devices ..." See Zielinski col. 5 lines 9-18 and col. 6 lines 21.). With respect to applicant's claim 2 and 20, page 5 paragraph 7 of the Official Action recognizes that Zielinski "does not explicitly teach wherein the respective utilization value of said each distributed processing unit is a percentage of saturation of said each

distributed processing unit." The Official Action cites Choquier col. 10, lines 66 - col. 11, line

12, and col. 14, line 60 - col. 15, line 6 for teaching a respective utilization value that is a

percentage of saturation of the distributed processing unit.   However, neither Zielinski nor

Choquier suggests that a percentage of saturation of a distributed processing unit could or should

be substituted for the resource constraint for the distributed processing unit in Zielinski.

Paragraph 8 on page 5 of the Official Action says this would aid efficient use of available

processing resources, but only the applicant's novel disclosure suggests that there would be an

advantage or improvement by a weighted distribution of work requests to distributed processing

units based on a percentage of saturation of each distributed processing unit. Each of Zielinski

and Choquier appears to be entirely satisfactory for its intended purpose, and neither suggests the

proposed combination and modification so as to produce the further advantages as taught by the

applicant's disclosure.

In particular, the applicants' disclosure teaches a dynamic form of load balancing based

on various levels of usage or dynamic loading of the distributed processing units, in contrast to

the relatively static weights used in Zielinski based on resource constraints of the distributed

processing units.   The applicant's method goes beyond taking the maximum capability of the

particular data processing units into consideration when configuring the system. (Applicant's

specification, page 2 line 19-22.) The applicants' specification "describes a method of reducing

system overload conditions without the cost of additional processing units in a distributed data

processing system." (Applicant's specification, page 42, lines 17-19.) The applicant's method

monitors distributed performance by collecting performance statistics and does load balancing

based on the collected performance statistics. The load balancing reduces dynamic overload

conditions because the weighted distribution of work requests to the distributed processing units is based on a percentage of saturation of each distributed processing unit. (See applicants' specification, page 35, lines 2-13.)

It is the percentage of saturation of each distributed processing unit that is indicative of an incipient overload condition that might be avoided by a redistribution of the incoming workload. An incipient overload condition is not indicated by a resource constraint of a distributed processing unit. The resource constraint is not indicative of an incipient overload condition that might be avoided by a redistribution of the incoming workload.

When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all limitations in a claim." CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR Int'l v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)). A fact finder should be aware of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. Id., citing Graham, 383 U.S. at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight.").

On page 6 of the Official Action, claims 7-8 and 25-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al. (U.S. 7,487,243 B1) in view of Garnette et al. (U.S. 7,032,037). In reply, claims 7-8 and 25-26 have been canceled.

On page 7 of the Official Action, claims 9, 11, 27, and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al. (U.S. 7,487,243 B1) in view of Kapoor (U.S. 5,884,038). In reply, claims 9, 11, 27, and 29 have been canceled.

On page 10 of the Official Action, claims 12 and 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al. (U.S. 7,487,243 B1) in view of Caccavale (U.S. 2002/0129277). Applicant respectfully traverses. Claims 12 and 30 each recite "the respective utilization value of said each virus checking server indicating a percentage of saturation of said each virus checking server; ..." As discussed above with respect to applicant's claim 2, Zielinski et al. does not suggest utilization values indicating a percentage saturation of each of the servers, nor would it have been obvious to modify Zielinski et al. to use a percentage of saturation of each of the servers. Neither does Caccavale suggest utilization values indicating a percentage of saturation of each of the servers. Nor does Caccavale disclose or suggest the use of different weights for his round-robin load balancing (step 62 in FIG. 5; page 6 paragraph [0045] of Caccavale). Applicant's load balancing based on the percentage of saturation of each of the servers offers a substantial improvement over the relatively static load balancing method of Zielinski.

On page 12 of the Official Action, claims 13 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al (U.S. 7,487,243 B1) in view of Caccavale (U.S. 2002/0129277) and Choquier et al. (U.S. 5,774,668). In reply, applicant respectfully traverse and submits that claims 13 and 31 are patentable due to the limitations incorporated by reference from their base claims 12 and 30, because Choquier does not disclose or suggest the limitations of the base claims 12 and 30 that are missing from Zielinski and Caccavale.

On page 13 of the Official Action, claims 15 and 33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al (U.S. 7,487,243 B1) in view of Caccavale (U.S. 2002/0129277) and Garnett et al.. (U.S. 7,032,037).. In reply, applicant respectfully traverses and submits that claims 15 and 33 are patentable due to the limitations incorporated by reference from their base claims 12 and 30, because Garnett does not disclose or suggest the limitations of the base claims 12 and 30 that are missing from Zielinski and Caccavale.

On pages 13-14 of the Official Action, claims 16 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zielinski et al (U.S. 7,487,243 B1) in view of Caccavale (U.S. 2002/0129277) and Kapoor et al.. (U.S. 5,884,038). In reply, In reply, applicant respectfully traverses and submits that claims 16 and 35 are patentable due to the limitations incorporated by reference from their base claims 12 and 30, because Kapoor does not disclose or suggest the limitations of the base claims 12 and 30 that are missing from Zielinski and Caccavale.

On page 16 of the Official Action, claims 12 and 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Komani (U.S. 2003/0187711 A1) in view of Caccavale (U.S. 2002/0129277). In reply, applicant respectfully traverses.

In Komai, a schedule management module is referring to schedule information of a user so as to select an unoccupied time of the processing system for which the user does not use the processing system, so that an execution module executes a predetermine process in the unoccupied time. (Komai, Abstract; FIG. 1.) Komai is not load balancing virus checking requests from the network file server to a plurality of virus checking servers; instead, Komai is determining when a user's computer should do virus checking. Nor does Komai obtain a weight for load balancing by applying a function to a percentage of saturation of the user's computer. Instead, Komai's scheduling management module is looking at a user's schedule to find unoccupied time, so that the execution module executes a predetermine process in the unoccupied time.

In Caccavale, virus checking requests are distributed in round-robin fashion to a plurality of virus checking servers. (Step 62 in FIG. 5; page 6 paragraph [0045] of Caccavale). However, Caccavale does not disclose or suggest using different weights for his round-robin load balancing.

Each of Komai and Caccavale appears to be entirely satisfactory for its intended purpose. Each of Komai and Caccavale are directed to different environment and problem for virus checking. Komai is directed to scheduling the virus checking of the files on a user's personal computer when the user is absent. Caccavale is directed to distributing network files over a

plurality of virus checking servers. Neither Komai nor Caccavale discloses or suggests obtaining respective utilization values indicating percentages of saturation of a plurality of virus checking servers, and applying a function to these utilization values to obtain weights for weighted round-robin load balancing of virus checking requests to the virus checking servers. Therefore, applicant respectfully submits that improper hindsight would be required to combine Komai and Caccavale and to add the missing claim elements and modify the combination so as to reconstruct the applicant's invention of claims 12 and 30.

On page 18 of the Official Action, claims 5, 10, 14, 17-18, 23, 28, 32, and 35-36 were indicated as allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and to include all of the limitations of the base claim and any intervening claims. In reply, claims 5, 10, 14, 17-18, 23, 28, 32, and 35-36 have been amended in response to the 112 rejection as discussed above and have been re-written in independent form and to include all of the limitations of the base claim and any intervening claims.

In view of the above, it is respectfully submitted that the application is in condition for allowance. Reconsideration and early allowance are earnestly solicited.

Respectfully submitted,

/ *Richard C. Auchterlonie* /

Richard C. Auchterlonie, Reg. No. 30,607

NOVAK DRUCE & QUIGG, LLP
1000 Louisiana, 53rd Floor
Houston, TX 77002
713-571-3460 (Phone)
713-456-2836 (Fax)
Richard.Auchterlonie@novakdruce.com